

NEONOTONIA, A NEW GENERIC NAME TO INCLUDE *GLYCINE WIGHTII*
(ARNOTT) VERDCOURT (LEGUMINOSAE, PAPILIONOIDEAE)

James A. Lackey
Department of Botany
Smithsonian Institution
Washington, D. C. 20560

Abstract.--Recent evidence indicates that *Glycine wightii* (Arnott) Verdcourt must be generically removed from the remaining species of the genus. Because there is no valid generic name to accept this transfer, the new generic name *Neonotonia* is proposed.

Since Hermann's (1962) revision of the genus *Glycine* Willdenow gen. consv., evidence from morphology, cytology, and biochemistry indicates that the common and widespread *G. wightii* (Arnott) Verdcourt [*G. javanica* auct. mult. non Linnaeus, and *G. petitiiana* (A. Richard) Schweinfurth] should not be maintained in the same genus with the cultivated soybean *G. max* (Linnaeus) Merrill and other wild species, among which is found the type of the genus, *G. clandestina* Wendland. Full justification for the generic separation will come in a later paper, but the new generic name *Neonotonia* is here proposed to accept the necessary transfer of *G. wightii*.

As suggested by Arnott (1834), *Neonotonia* is closely related to *Shuteria* Arnott. Table I will serve to distinguish these and associated genera. It is probable that *Glycine* sp. A. (Verdcourt, 1971) is congeneric with *Neonotonia wightii*: both taxa have 22 (44 in some *N. wightii*) large somatic chromosomes and canavanine in seeds. *Pueraria collettii* Prain [*P. siamica* Craib], *P. stricta* Kurz, *P. brachycarpa* Kurz, and *P. bella* Prain may possibly be referred to *Neonotonia* when they are better known.

Arnott (1834) first described *G. wightii* as the sole species of a new genus *Notonia*. Noticing, however, that de Candolle (1833) had already used *Notonia* for a genus of Compositae, Arnott substituted the name *Johnia* in the addendum of the text. *Johnia* Arnott is preoccupied by *Johnia* Roxburgh (1832), now considered a synonym of *Salacia* (Hippocrateaceae). Meyer (1836) independently described the genus *Bujacia*, which included only two species: *B. anonychia* [*G. wightii*] and *B. gampsonychia* [*Teramus labialis* (Linnaeus) Sprengel]. The generic description of *Bujacia* specifies alternately aborted anthers, which could refer only to *Teramus* and would definitely exclude *G. wightii*. *Bujacia* must therefore be

TABLE I

ATTRIBUTES OF *NEONOTONIA* AND ASSOCIATED GENERA

Genus	Attribute ^a								
	1	2	3	4	5	6	7	8	9
<i>Ophrestia</i> H.M.L. Forbes	2(3?)	D(U)	20	-	10	-	+ -	P	G(P)
<i>Teramnus</i> P. Brown	2+	D(U)	28(20?)	-	5	-	-	G(P)	P(G?)
<i>Glycine</i> Willdenow	1	D	40,80	-	10	-	-	G	P-G
<i>Teyleria</i> Backer	3	D	unknown	unknown	10	+	-	G	P
<i>Shuteria</i> Arnott	1-3(5?)	U	unknown	+	10	-	-	G	G
<i>Neonotonia</i> Lackey	3+	U	22,44	+	10	-	-	G	P

^aAttributes, 1 = Number of flowers per node of the inflorescence. 2 = Upper calyx lobes United or Distinct. 3 = Somatic chromosome number. (Lackey, 1977a). 4 = Canavanine present (+) or absent (-) from seeds (Lackey, 1977b). 5 = Number of fertile anthers per flower. 6 = Stems strongly four-angled with dense brown hairs on the angles (+) or not strongly angled and without prominent hairs on the angles (-). 7 = Seeds arillate (+) or without an aril (-) (although sometimes with a papery remain of the funiculus, definition of aril follows Polhill (1976)). 8 = Petals Pubescent or Glabrous. 9 = Inside of calyx teeth Pubescent or Glabrous.

lectotypified by *B. gampsonychia*. As a result there is no valid generic name to accept a transfer of *G. wightii*. The following names are therefore proposed.

Neonotonia Lackey, nom. nov. *Notonia* Arnott in Wight and Walker-Arnott, Prod. Fl. Ind. Or. 207 (1834)--Generitypus: *Notonia wightii* Arnott loc. cit. = *Neonotonia wightii* (Arnott) Lackey, comb. nov.--non *Notonia* de Candolle in Guillemin, Arch. Bot. 2:518 (1833)--*Johnia* Arnott, op. cit. 449 (1834); non *Johnia* Roxburgh, Fl. Ind. 1:168 (1832).

Bujacia E. Meyer, Comm. Pl. Afr. Aust. 127 (1836) pro parte.--Lectogeneritypus: *B. gampsonychia* E. Meyer, loc. cit. = *Teramnus labialis* (Linnaeus f.) Sprengel.

Glycine sect. *Javanicae* sensu Harms in Engler, Pflanz. Afr. 3(1):654 (1915) pro parte.

Glycine subgen. *Glycine* sensu Hermann, USDA Tech. Bull. 1268: 24 (1962).

Glycine subgen. *Bracteata* Verdcourt, Taxon 15:34 (1966)--Sp. typica: *G. wightii* (Arnott) Verdcourt, loc. cit. = *Neonotonia wightii* (Arnott) Lackey.

For fuller synonymy see Verdcourt (1971) and Hermann (1962).

LITERATURE CITED

- Arnott, G. A. Walker-. 1834. (= G. A. Walker-Arnott, 1834).
- Candolle, A. P. de. 1833. Genres nouveaux appartenant a la famille des Composees ou Synantherees. pp. 514-519 in J. B. A. Guillemain, Archives de Botanique. . . Vol. 2. Henri Dupuy, Paris.
- de Candolle, A. P. 1833. (= Candolle, A. P. de., 1833).
- Harms, H. 1915. Leguminosae. pp. 327-698 in A. Engler and O. Drude, eds. Die Vegetation der Erde. IX. Die Pflanzenwelt Afrikas insbesondere seiner tropischen Gebiete. Wilhelm Engelmann, Leipzig.
- Hermann, F. J. 1962. A revision of the genus *Glycine* and its immediate allies. U.S.D.A. Technical Bull. No. 1268.
- Lackey, J. A. 1977a. A synopsis of Phaseoleae (Leguminosae, Papilionoideae). Ph.D. dissertation. Iowa State University, Ames.
- Lackey, J. A. 1977b. A revised classification of the tribe Phaseoleae (Leguminosae, Papilionoideae), and its relation to canavanine distribution. Bot. J. Linn. Soc. 74(2):163-178.
- Meyer, E. H. F. 1836. Commentariorum de plantis Africae australioris, . . . Leopold Voss, Leipzig.
- Polhill, R. M. 1976. Genisteeae (Adans.) Benth. and related tribes (Leguminosae). Botanical Systematics. 1:143-368.
- Roxburgh, W. 1832. Flora indica; or, descriptions of Indian plants. Ed. 2. Serampore.
- Verdcourt, B. 1966. A proposal concerning *Glycine* L. Taxon 15:34-36.

- Verdcourt, B. 1971. Tribe Phaseoleae. pp. 503-807 *in* J. B. Gillett, R. M. Polhill, and B. Verdcourt. Leguminosae (Part 4) subfamily Papilionoideae (2) *in* E. Milne-Redhead and R. M. Polhill, eds. Flora of Tropical East Africa. Whitefriars Press, London and Tonbridge.
- Walker-Arnott, G. A. 1834. Leguminosae. pp. 178-298 *in* R. Wight and G. A. Walker-Arnott, Prodrromus florae peninsulae Indiae orientalis. Parbury, Allen, & Co., London.